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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,989	04/28/2005	Andre Ebner	1454.1611	3078

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

SOBUTKA, PHILIP

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/532,989

Applicant(s)

EBNER ET AL.

Examiner

Philip J. Sobutka

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/11/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because, as required by 37 CFR 1.84 (I), which addresses character of lines, numbers, and letters in drawings:

All drawings must be made by a process which will give them satisfactory reproduction characteristics. Every line, number, and letter must be durable, clean, black (except for color drawings), sufficiently dense and dark, and uniformly thick and well-defined. The weight of all lines and letters must be heavy enough to permit adequate reproduction. This requirement applies to all lines however fine, to shading, and to lines representing cut surfaces in sectional views. Lines and strokes of different thicknesses may be used in the same drawing where different thicknesses have a different meaning.

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the lines and lettering in the figures are not "clean" and "uniformly thick and well-defined". All drawings appear to be poor copies of the originals in the PCT application.
3. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application.
4. The requirement for corrected drawings will not be held in abeyance.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 16,18,19,22,23,26,27,28,33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burr (US 7,109,961) in view of Fredricksson (US 2004/0023678).

Consider claim 16. Burr teaches a method for synchronization of mobile stations in a radio communication system that is at least partly self-organizing and has mobile stations which are situated in reciprocal radio range via an air interface, comprising:

transmitting synchronization sequences from at least some of the mobile stations
(*Burr see for example paragraphs 13, 31,33*);

using the synchronization sequences from other mobile stations so that each mobile station can synchronize itself (*Burr see for example figure 1, paragraphs 34,35*).

Burr lacks a teaching of at least one of the mobile stations transmitting payload data with a range that is less than a range for synchronization sequences transmitted by the mobile station.

Fredricksson teaches an arrangement wherein the range of synchronization and payload packets are adjustable and can be adjusted such that the payload data is less than the synch data (*Fredricksson see for example figures 1,2, paragraphs 35,36*).

Fredricksson teaches that adjusting the synch range greater than the data range allows mobiles to complete synchronization before entering the data area (*Fredricksson see especially paragraphs 10*). Therefore it would have been obvious to one of ordinary skill in the art to modify burr to transmit synch data with a greater range than payload data in order to allow mobile to complete synchronization before entering data transmission range as taught by Fredricksson.

As to claim 18, Burr in view of Fredricksson teaches the method according to claim 16, wherein the synchronization sequences are transmitted on a dedicated synchronization channel (*Burr see especially figure s4, 5, column 5, line 43 – column 6, line 18*).

As to claim 19, Burr in view of Fredricksson teaches the method according to claim 16, wherein in order for a mobile station to synchronize itself, the mobile stations derives an internal synchronization position, the internal synchronization position being derived from synchronization positions detected from the other mobile stations (*Burr see especially figure s4, 5, column 5, line 43 – column 6, line 18*).

As to claim 22, Burr in view of Fredricksson teaches the method according to claim 16, wherein the synchronization sequences are transmitted via bursts which are separate from payload data bursts (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

As to claim 23, Burr in view of Fredricksson teaches the method according to claim 16, wherein the synchronization sequences are transmitted cyclically or periodically (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

As to claim 26, Burr in view of Fredricksson teaches the method according to claim 16, wherein the mobile station uses the synchronization sequences to synchronize time slots (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

As to claim 27, Burr in view of Fredricksson teaches the method according to claim 16, wherein only one mobile station starts a transmit operation within each time slot (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

As to claim 28, Burr in view of Fredricksson teaches the method according to claim 22, wherein the synchronization sequences are transmitted cyclically or periodically (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

Consider claim 33. Burr teaches a mobile station for a radio communication system which is at least partly self-organizing, comprising:

a transmitter to: send synchronization sequences with reference to which other mobile stations can synchronize themselves (*Burr see for example paragraphs 13, 31,33*).

Burr lacks a teaching of sending payload data with a range that is less than a range for the synchronization sequences sent by the mobile station.

Fredricksson teaches an arrangement wherein the range of synchronization and payload packets are adjustable and can be adjusted such that the payload data is less than the synch data (*Fredricksson see for example figures 1,2, paragraphs 35,36*). Fredricksson teaches that adjusting the synch range greater than the data range allows mobiles to complete synchronization before entering the data area (*Fredricksson see especially paragraphs 10*). Therefore it would have been obvious to one of ordinary skill in the art to modify burr to transmit synch data with a greater range than payload data in order to allow mobile to complete synchronization before entering data transmission range as taught by Fredricksson.

As to claim 34, Burr in view of Fredricksson teaches the mobile station according to claim 33, further comprising: a receiver to receive synchronization sequences from other mobile stations (*Burr see for example paragraphs 13, 31,33*).

Consider claim 35. Burr teaches a radio communication system that is at least partly self-organizing, comprising: a plurality of mobile stations each having a transmitter to: send synchronization sequences with reference to which other mobile stations can synchronize themselves (*Burr see for example paragraphs 13, 31,33*),

Burr lacks a teaching of sending payload data with a range that is less than a range for the synchronization sequences sent by the mobile station.

Fredricksson teaches an arrangement wherein the range of synchronization and payload packets are adjustable and can be adjusted such that the payload data is less than the synch data (*Fredricksson see for example figures 1,2, paragraphs 35,36*).

Fredricksson teaches that adjusting the synch range greater than the data range allows mobiles to complete synchronization before entering the data area (*Fredricksson see especially paragraphs 10*). Therefore it would have been obvious to one of ordinary skill in the art to modify burr to transmit synch data with a greater range than payload data in order to allow mobile to complete synchronization before entering data transmission range as taught by *Fredricksson*.

8. Claims 17,20,21,24,25,29,30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burr in view of Fredricksson and further in view of Larsen (US 6,785,510).

Consider claim 17. Burr in view of Fredricksson teaches the method according to claim 16, wherein the synchronization sequences are part of a data packet which carries information.

Larsen teaches a synch packet that contains data regarding quality in order that decisions about connection can be made before connection and synchronization (*Larsen see for example column 3, lines 15 – column 4, line 15*). It would have been obvious to one of ordinary skill in the art to modify Burr in view of Fredricksson to

include quality data in order allow decisions about connection to be made before synchronization as taught by Larsen.

Consider claim 20. Burr in view of Fredricksson teaches the method according to claim 19, but lacks a teaching of wherein when deriving the internal synchronization position, the mobile station takes into consideration a quality level of each of the detected synchronization positions and/or its preceding synchronization position.

Larsen teaches a synch packet that contains data regarding quality in order that decisions about connection can be made before connection and synchronization (*Larsen see for example column 3, lines 15 – column 4, line 15*). It would have been obvious to one of ordinary skill in the art to modify Burr in view of Fredricksson to include quality data in order allow decisions about connection to be made before synchronization as taught by Larsen.

Consider claim 21. Burr in view of Fredricksson teaches the method according to claim 16, but lacks a teaching of wherein synchronization sequences are transmitted in the same burst which also carries the payload data.

Larsen teaches a synch packet that contains data regarding quality in order that decisions about connection can be made before connection and synchronization (*Larsen see for example column 3, lines 15 – column 4, line 15*). It would have been obvious to one of ordinary skill in the art to modify Burr in view of Fredricksson to

include quality data in order allow decisions about connection to be made before synchronization as taught by Larsen.

Consider claim 24. Burr in view of Fredricksson teaches the method according to claim 16, but lacks a teaching of wherein the mobile stations transmit a quality level of their synchronization together with the synchronization sequences in order to improve synchronization.

Larsen teaches a synch packet that contains data regarding quality in order that decisions about connection can be made before connection and synchronization (*Larsen see for example column 3, lines 15 – column 4, line 15*). It would have been obvious to one of ordinary skill in the art to modify Burr in view of Fredricksson to include quality data in order allow decisions about connection to be made before synchronization as taught by Larsen.

Consider claim 25. Burr in view of Fredricksson and Larsen teaches the method according to claim 24, wherein the synchronization sequences are transmitted via bursts which are separate from payload data bursts (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

Consider claim 29. Burr in view of Fredricksson teaches the method according to claim 28, but lacks a teaching of wherein the mobile stations transmit a quality level of their synchronization together with the synchronization sequences in order to improve synchronization.

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Larsen teaches a synch packet that contains data regarding quality in order that decisions about connection can be made before connection and synchronization (*Larsen see for example column 3, lines 15 – column 4, line 15*). It would have been obvious to one of ordinary skill in the art to modify Burr in view of Fredricksson to include quality data in order allow decisions about connection to be made before synchronization as taught by Larsen.

Consider claim 30. Burr in view of Fredricksson and Larsen teaches the method according to claim 29, wherein the synchronization sequences are transmitted via bursts which are separate from payload data bursts (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

Consider claim 31. Burr in view of Fredricksson and Larsen teaches the method according to claim 30, wherein the mobile station uses the synchronization sequences to synchronize time slots (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

Consider claim 32. Burr in view of Fredricksson and Larsen teaches the method according to claim 31, wherein only one mobile station starts a transmit operation within each time slot (*Burr see especially figures 4, 5, column 5, line 43 – column 6, line 18*).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached Monday through Friday from 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4711.

10. The central fax phone number for the Office is 571-273-8300.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number.

CENTRALIZED DELIVERY POLICY: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

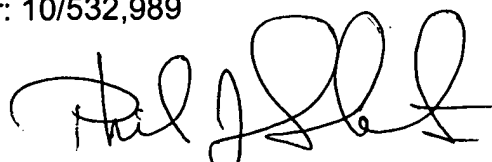
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Philip J Sobutka

(571) 272-7887



PHILIP J. SOBUTKA
PATENT EXAMINER

4/13/07